

What is claimed is:

Claim 1. In a gobo for projecting a pattern in several colors wherein the color-
5 separated and rastered single-color components of the pattern are each reproduced in the
gobo in a dichroic surface-coating corresponding to respective colors and disposed on a
transparent substrate comprising a plurality of mutually superimposed disc-shaped and
transparent substrates, each substrate having disposed thereon a dichroic surface-coating
for forming a color filter; whereby combinations of the color filters are capable of
10 reproducing the colors of the multi-color pattern; and that respective color-emitting
surface coatings present a pattern that coincides with the pattern for corresponding color
components in the multi-color pattern, said gobo further including a substrate that has a
total-blocking surface coating in a pattern corresponding to the contrast of the multi-color
pattern; and in that each substrate has a surface coating on only one side of the substrate;
15 the improvement comprising: each of the plurality of substrates bonded over the
entirety of every surface contiguous to another facing substrate,
whereby the gobo is an integrally bonded structure.

Claim 2. A gobo according to claim 1 wherein at least one of the disc-shaped
20 substrates has a thickness of less than 0.2 mm.

Claim 3. A gobo according to claim 1 wherein the distance between the first and the
last pattern-emitting plane in the gobo is less than about 1 mm.

25 Claim 4. A gobo according to claim 1 wherein said gobo includes a first substrate
that has material thickness of about 1 mm and a total-blocking coating that presents the
pattern of the contrast and that disposed on the first substrate are further substrates each
of which has a material thickness of about 0.1 mm and a surface coating that reflects a
determined light wavelength interval and that the light wavelength interval corresponds
30 to the light wavelength of the complementary colors to those color into which thy multi-

color pattern is separated; and that the surface coatings each present a respective single-color pattern.

5 Claim 5. A gobo according to claim 1 wherein there is deposited on the transparent disc-shaped substrate with the aid of vacuum vaporization technique a dichroic surface-coating which includes alternative layers of high and low refractive index, resulting in reflection of incident light of a determined wavelength interval and the transmissi0on of other incident wavelength, such as to form a color filter.

10 Claim 6. A gobo according to claim 1 wherein the first layer closest to the substrate has a higher reflective index than the second layer in the dichroic layer; has an optical thickness corresponding to a quarter of the wavelength of the color to be reflected; and in that last deposited layer in the surface-coating has an optical thickness corresponding to half the wavelength of the color to be reflected.

15 Claim 7. A gobo according to claim 1 wherein the dichroic layers of higher refractive index have a refractive index greater than 2; in that the dichroic layers of lower refractive index have a refractive index below 1.6; in that the dichroic layers include quartz and titanium dioxide respectively; and in that the dichroic coating includes more
20 than ten layers.

Claim 8. A gobo according to claim 1 wherein the bonding is provided by a glue comprising a polymerizable material having an as-applied viscosity of about 30,000 cps or less.

25 Claim 9. A gobo according to claim 1 wherein the bonding is provided by a glue comprising a polymerizable material having an as-applied viscosity of about 1,000 cps

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Claim 10. A gobo according to claim 8 wherein the polymerizable material is a single-part silicone polymerizable by reaction with the moisture in the ambient air.

5 Claim 11. A gobo according to claim 9 wherein the polymerizable material is a two-part silicone polymerizable by an oxime reaction.

Claim 12. A gobo according to claim 10 wherein the polymerizable material is non-thixotropic.

10 Claim 13. A gobo according to claim 11 wherein the polymerizable material is non-thixotropic.

Claim 14. A method of making an integrally bonded gobo comprising the steps of:
i) providing a blocking substrate and holding it in a fixture;
15 ii) applying a measured dose of a polymerizable material to said blocking substrate to form a continuous interlayer;
iii) superimposing one of a plurality of disc-shaped, transparent substrates each having a pattern thereon on said blocking substrate;
iv) adjusting said one transparent substrate to align said pattern;
20 v) polymerizing said polymerizable material; and
vi) repeating steps ii) – v) to superimpose and glue all said plurality of substrates: whereby said plurality of mutually superimposed disc-shaped and transparent substrates is bonded to each other and to said blocking substrate to form an integrally bonded gobo.

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Claim 15. The method of Claim 14 wherein the polymerizable material is a two-part silicone glue having an initial viscosity of about 1,000 cps polymerizing by an oxime reaction.

Claim 16. The method of Claim 14 wherein the polymerizable material is a single-part silicone glue having an initial viscosity of about 30,000 cps polymerizing by a reaction with the moisture in the ambient atmosphere.

5 Claim 17. The method of Claim 15 wherein the polymerizable material is non-thixotropic.

Claim 18. The method of Claim 16 wherein the polymerizable material is non-thixotropic..

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